

## Background

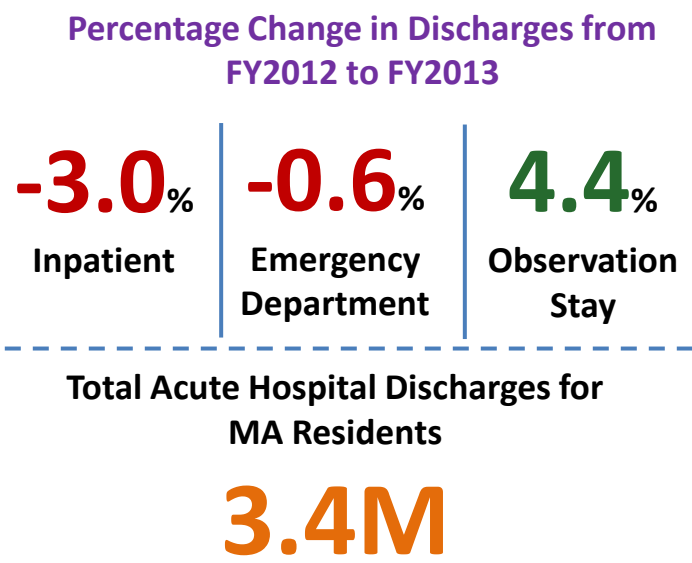
These statewide and regional inpatient, emergency department and observation stay utilization statistics include Massachusetts residents who have been discharged from Massachusetts acute care hospitals for the period beginning in October 1, 2008 to September 30, 2013 (Hospital Fiscal Year 2009 through 2013). Data books are available as a complement to the report to provide more detail.

This analysis was produced using CHIA's Acute Hospital Case Mix Databases which are comprised of patient level discharge data submitted by Massachusetts acute hospitals prior to payment by a public payer or private insurer. The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.

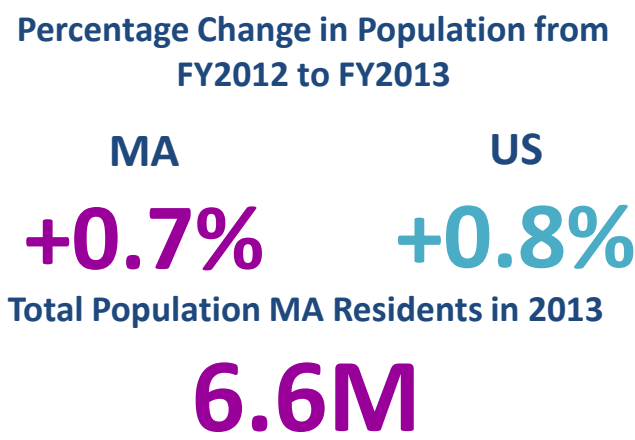
To learn more about the data and process used in the development of this report, please see the technical appendix. To see utilization data by region, please go to <http://www.chiamass.gov/utilization-analysis>.

Overview

Acute Hospital Discharges



Population



Highlights

**-47,272**  
Inpatient discharges declined by 47,272 from FY2011 to FY2013, representing a 5.9% decrease. Nationally, inpatient discharges decreased 5.2% from 2010 to 2012 and are projected to decrease by another 0.5% in 2013.\*

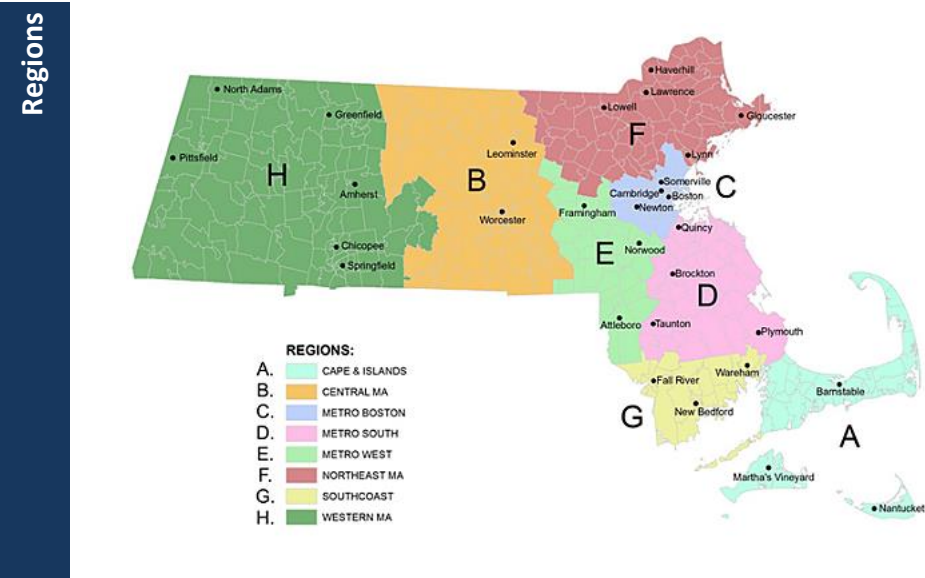
**+25.6%**  
Observation stay discharges have increased each year from FY2009 to FY2013 for an overall increase of 25.6% during this time period. Medicare observation stay discharges increased by 64.0% during this time period, contributing to the overall statewide increase.

**0.0%**  
Emergency department discharges in Massachusetts remained relatively constant from FY2009 to FY2013, while national emergency department discharges increased from 2010 to 2012.\*

**Regional Declines**  
All discharge types for residents of Western and Central MA regions declined from FY2012 to FY2013, the only two regions that experienced overall declines for inpatient, emergency department and observation stay discharges.

\*Source: Agency for Healthcare Research and Quality's (AHRQ) Healthcare Cost and Utilization Project (HCUP)

Massachusetts Demographics and Hospital Discharge Trends, FY2009-2013



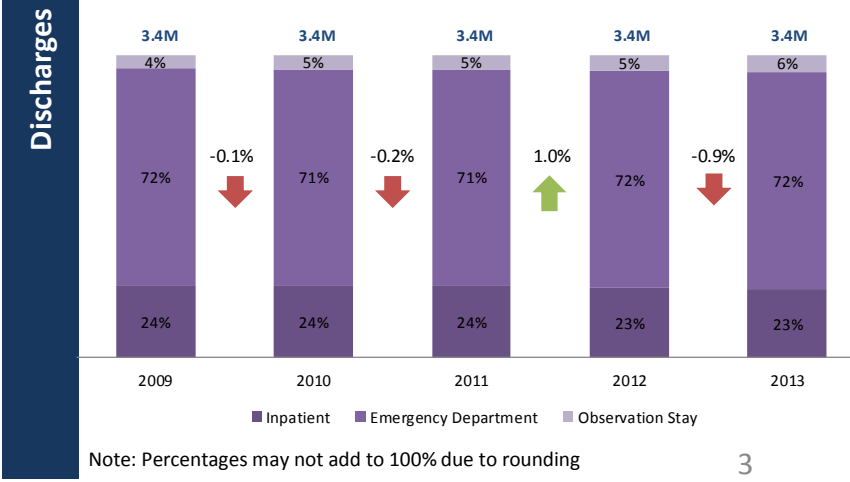
Demographics

ACS 5-year Estimates (2009-2013)*	MA	US
Total Population	6,605,053	311,536,594
Age		
0-19	24.5%	26.6%
20-64	61.4%	60.0%
65+	14.1%	13.4%
Race & Ethnicity		
Hispanic	9.9%	16.6%
Non-Hispanic		
White	75.7%	63.3%
Black/African American	6.3%	12.2%
Asian	5.5%	4.8%
Other Races**	0.8%	1.0%
Two or More Races	1.8%	2.1%
Income		
Mean Household Income	\$90,871	\$73,487
Below Poverty Level	11.0%	15.0%

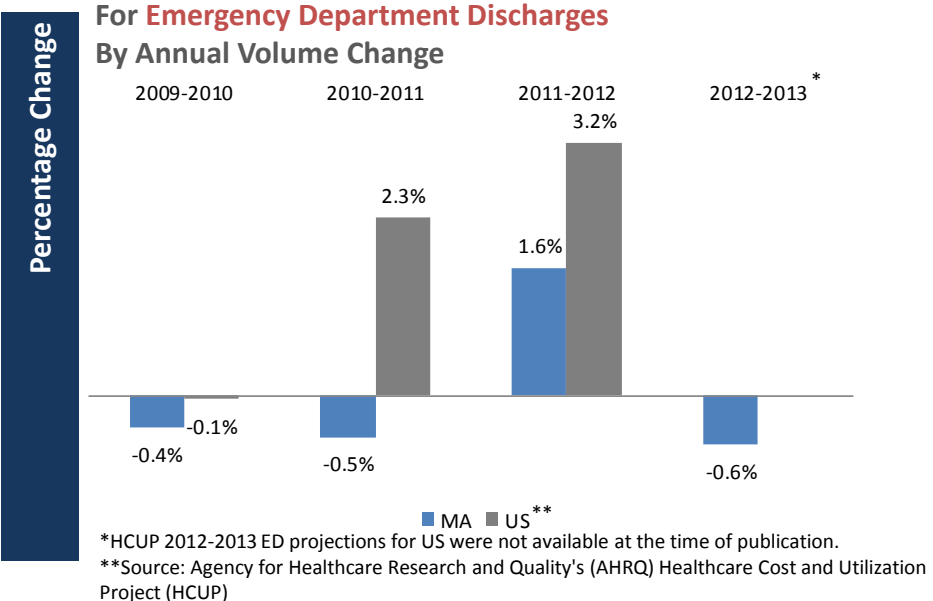
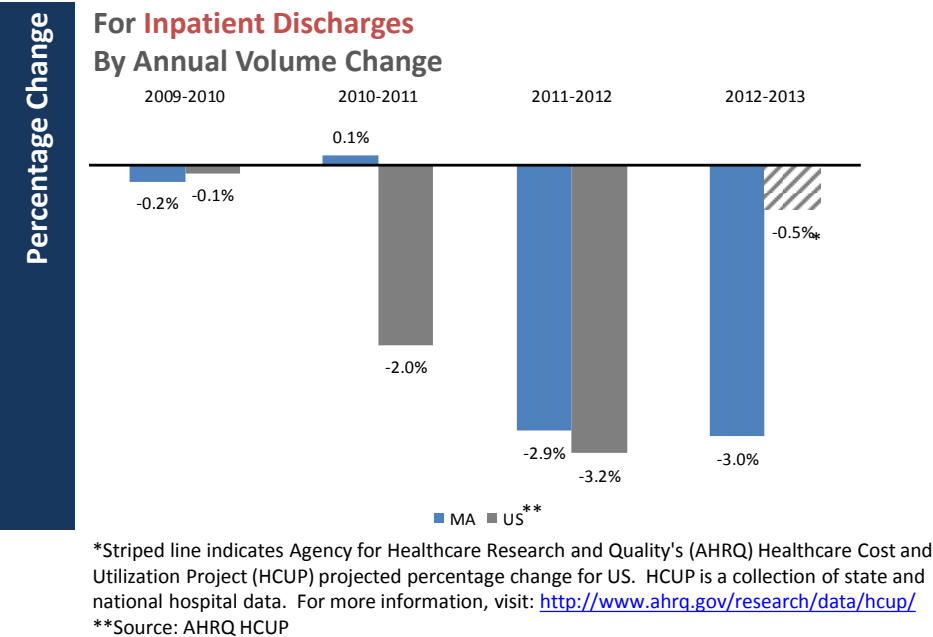
\*Source: U.S. Department of Commerce United States Census Bureau <http://factfinder2.census.gov>  
\*\*Includes Native and Pacific Islander and American Indian/Alaskan Native

Discharges

Number of Discharges of MA Residents from MA Acute Care Hospitals						Percent Change	
	2009	2010	2011	2012	2013	2012-2013	2009-2013
Inpatient	806,061	804,566	805,402	781,654	758,130	-3.0%	-5.9%
ED	2,406,731	2,396,897	2,384,167	2,423,076	2,407,775	-0.6%	0.0%
Obs. Stay	150,204	157,149	161,055	180,722	188,633	4.4%	25.6%
TOTAL	3,362,996	3,358,612	3,350,624	3,385,452	3,354,538	-0.9%	-0.3%



Hospital Discharge Trends



**For Inpatient Discharges**  
**By Volume, FY2013**

Top 5 MS-DRGs

MA Rank	MS-DRG Name (DRG Code)	MA Discharges	2012 US Discharges*
1	Normal newborn (795)	5.9%	7.3%
2	Vaginal delivery w/o complicating diagnoses (775)	5.0%	5.7%
3	Psychoses (885)	3.9%	3.1%
4	Major joint replacement or reattachment of lower extremity w/o MCC (470)	3.0%	2.7%
5	Esophagitis, gastroent & misc digest disorders w/o MCC (392)	2.4%	2.2%

\*Source: Agency for Healthcare Research and Quality's (AHRQ) Healthcare Cost and Utilization Project (HCUP)

**For Emergency Department Discharges**  
**By Volume, FY2013**

Top 5 CCS Groupings

MA Rank	Diagnosis (CCS Code)*	MA Discharges	2012 US Discharges**
1	Sprain (232)	6.1%	5.3%
2	Superficial injury; contusion (239)	5.4%	5.0%
3	Abdominal pain (251)	4.7%	4.9%
4	Other upper respiratory infections (126)	4.1%	5.0%
5	Back problem (205)	3.6%	3.3%

\*Clinical Classification Software (CCS) Descriptions based on Primary Diagnosis Code  
\*\*Source: Agency for Healthcare Research and Quality's (AHRQ) Healthcare Cost and Utilization Project (HCUP)

Hospitals by Total Discharge Volume

By **Discharge Volume**, FY2013

2013 Rank	Top 5 Hospital Sites	2013 Total Discharges	% of Total Discharges			2012 Rank
			Inpatient	ED	Obs. Stay	
1	Boston Medical Center - Menino Pavilion Campus	135,754	18.6%	75.8%	5.6%	1
2	Baystate Medical Center	122,172	30.5%	62.3%	7.1%	2
3	Massachusetts General Hospital	114,486	39.6%	57.2%	3.2%	3
4	UMass Memorial Medical Center - University Campus	94,139	21.7%	67.8%	10.6%	4
5	South Shore Hospital	92,493	26.4%	66.2%	7.4%	5
ALL OTHERS		2,795,494	21.7%	72.9%	5.4%	
TOTAL		3,354,538	22.6%	71.8%	5.6%	

By Percentage **Increase**, FY2012-FY2013

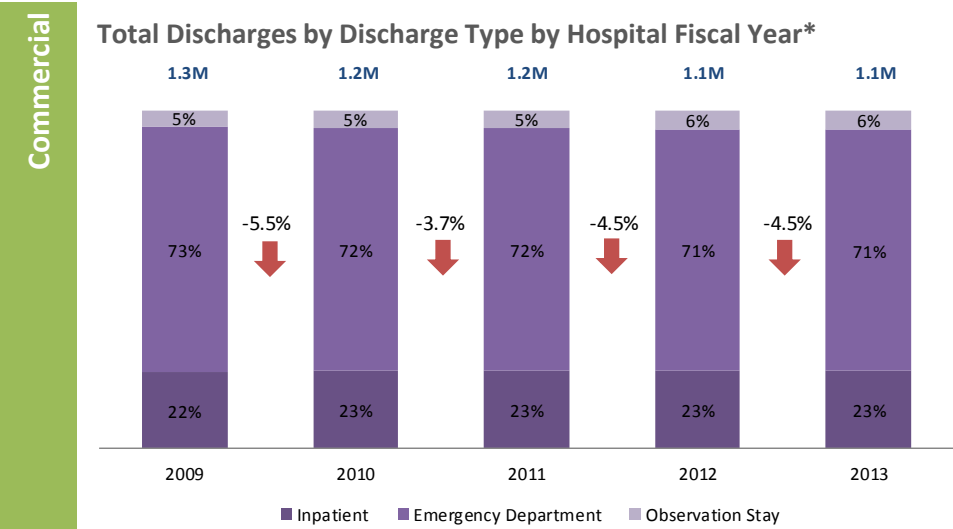
Top 5 Hospital Sites	% change	2013 Total Discharges	% of Total Discharges		
			Inpatient	ED	Obs. Stay
Heywood Hospital	7.3%	27,633	18.9%	72.9%	8.2%
Nantucket Cottage Hospital	6.9%	8,283	6.2%	91.0%	2.7%
Signature Healthcare Brockton Hospital	6.4%	65,245	19.8%	75.4%	4.9%
Lowell General Hospital	6.0%	62,039	27.2%	70.8%	2.0%
Cambridge Health Alliance - Whidden Hospital Campus	4.5%	45,715	10.6%	89.4%	0.0%

By Percentage **Decrease**, FY2012-FY2013

Top 5 Hospital Sites	% change	2013 Total Discharges	% of Total Discharges		
			Inpatient	ED	Obs. Stay
Hallmark Health - Lawrence Memorial Hospital Campus	-21.4%	15,574	22.7%	70.3%	7.0%
Shriners Hospitals for Children Boston	-12.9%	155	72.3%	0.0%	27.7%
Dana-Farber Cancer Institute	-9.8%	783	93.7%	0.0%	6.3%
Merrimack Valley Hospital, A Steward Family Hospital, Inc.	-9.0%	19,771	13.9%	82.3%	3.8%
Jordan Hospital*	-7.9%	47,710	17.5%	77.3%	5.2%

Note: Percentages may not add to 100% due to rounding  
\*Jordan Hospital became Beth Israel Deaconess Hospital-Plymouth on January 1, 2014.

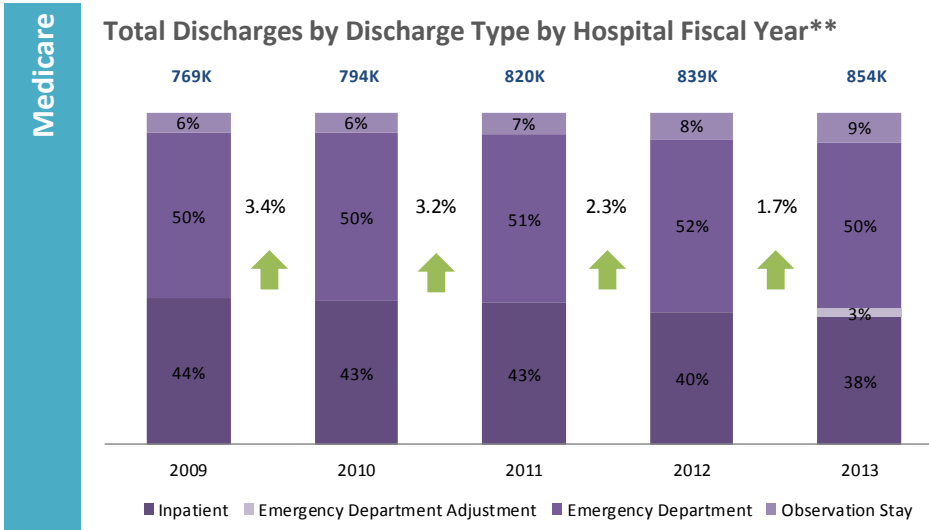
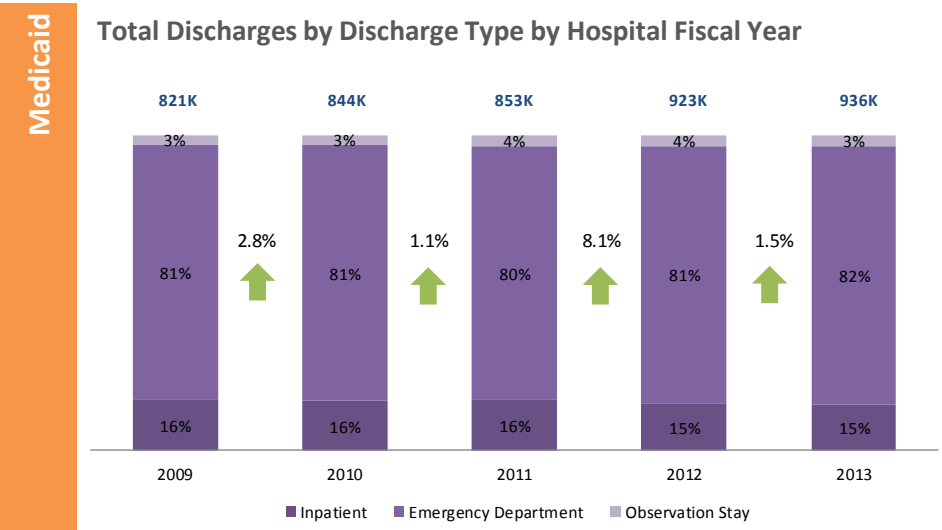
Discharge Trends By Payer Type



\*Manual adjustments have been made to account for the over reporting of 2013 Commercial Emergency Department discharges by one hospital system.

From FY2009 to FY2013, overall commercial discharge volume declined by 17.0%.\* During this time period, Medicaid discharges increased by 13.9% and Medicare discharges increased by 11.1%.\*\*

Please note that trends in total discharges by payer type may be the result of the change in the number of members enrolled in each payer type category. The payer type is derived using the primary payer information reported by the hospital at the time of patient discharge and may change upon payment by the insurer or payer.



\*\*Manual adjustments have been made to account for the under reporting of 2013 Medicare Emergency Department discharges by one hospital system.



Inpatient Discharges Top 10 DRGs, FY2013

All Inpatient Discharges	2013 Statewide DRG Rank	Title (MS-DRG Code)	Discharges	ALOS	Average Charges	% Total Discharges FY2013	% Change FY 2012- 2013	2012 Statewide DRG Rank
	1	Normal newborn (795)	44,785	2.5	\$3,788	5.9%	-2.7%	1
	2	Vaginal delivery w/o complicating diagnoses (775)	38,173	2.4	\$11,367	5.0%	-0.3%	2
	3	Psychoses (885)	29,483	9.9	\$19,308	3.9%	0.5%	3
	4	Major joint replacement or reattachment of lower extremity w/o MCC (470)	22,639	3.3	\$35,662	3.0%	1.9%	4
	5	Esophagitis, gastroent & misc digest disorders w/o MCC (392)	18,035	3.0	\$12,501	2.4%	-13.3%	5
	6	Neonate w other significant problems (794)	16,653	2.9	\$5,246	2.2%	3.4%	6
	7	Septicemia or severe sepsis w/o MV 96+ hours w MCC (871)	14,643	6.3	\$29,633	1.9%	20.6%	9
	8	Cesarean section w/o CC/MCC (766)	12,985	4.0	\$15,706	1.7%	-4.2%	7
	9	Cellulitis w/o MCC (603)	12,165	3.4	\$10,880	1.6%	-3.3%	8
	10	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC (897)	10,938	4.4	\$10,438	1.4%	-1.9%	10
		<b>ALL OTHERS</b>	<b>537,631</b>	<b>4.9</b>	<b>\$30,064</b>	<b>70.9%</b>		
		<b>TOTAL</b>	<b>758,130</b>	<b>4.6</b>	<b>\$25,511</b>	<b>100.0%</b>		